



Mark M. Davis

Burt and Marion Avery Family Professor

Microbiology and Immunology

 Curriculum Vitae available Online

CONTACT INFORMATION

• Alternate Contact

Anita Cordova - Administrative Assistant

Email anitac@stanford.edu

Tel 650-497-3513

Bio

ACADEMIC APPOINTMENTS

- Professor, Microbiology and Immunology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Chair, Stanford University School of Medicine - Microbiology & Immunology, (2002-2004)
- Director, Stanford Institute for Immunity, Transplantation and Infection, Stanford University School of Medicine, (2004- present)
- The Burt and Marion Avery Family Professor of Immunology, Stanford University School of Medicine, (2007- present)

HONORS AND AWARDS

- Member, Henry Kunkel Society (2018)
- Distinguished Alumni Award, Caltech (2005)
- Foreign member, The Royal Society (2017)
- Paul Ehrlich Prize, Paul Ehrlich Foundation (2004)
- Member, National Institute of Medicine (2004)
- Ernst W. Bertner Award, M.D.Anderson Cancer Center/Univ. Texas (2003)
- The Rose Payne Award, American Society for Histocompatibility and Immunogenetics (2002)
- The Burt and Marion Avery Professorship, Stanford University (2001-2006)
- Newton-Abraham Visiting Professor, University of Oxford (2000-2001)
- Pius XI Award, Pontifical Academy of Sciences (2000)

- William B. Coley Award, Cancer Research Institute (2000)
- Novartis Prize for Basic Immunology, International Union of Immunology Societies (1998)
- General Motors Cancer Prize:Sloan Award, General Motors Cancer Fdn. (1996)
- King Faisal Prize, King Faisal Foundation (1995)
- Member, National Academy of Sciences (1993)
- Gairdner Prize, Gairdner Foundation (1989)
- Howard Taylor Ricketts Award, University of Chicago (1988)
- Eli Lilly Award in Microbiology and Immunology, American Society of Microbiology (1986)
- Passano Young Scientist Award, Passano Foundation (1985)
- Milton and Francis Clauser Doctoral Prize, Caltech (1981)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, American Association of Immunologists (2022 - present)

PROFESSIONAL EDUCATION

- Ph. D., Caltech , Molecular Biology (1981)
- B.A., The Johns Hopkins University , Molecular Biology (1974)

LINKS

- My lab site: <http://davislab.stanford.edu>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We are interested in the molecular basis of T and B lymphocyte recognition, as well as the control of differentiation and functional responses in these cells. These studies have ranged from analyzing the inherent diversity of these highly diverse molecules and relating it to their function and specificity (Davis and Bjorkman 1988; Xu et al 2000) to basic aspects of TCR biochemistry and cell biology (Huppa et al 2010, Lillemeier et al, 2010). We also developed peptide-MHC tetramers which are useful for staining and isolating specific T cells in both basic science and clinical applications (Altman et al 1996; Newell et al., 2012, 2013).

We have also been very much involved in trying to relate what we have learned in basic immunology using mouse models to understanding the human immune system. Here we have employed systems biology approaches to understand vaccine responses (Furman et al., 2013), twin studies to understand the relative influence of environment versus genetics (ongoing) and T cell repertoire studies to understand self vs non-self capabilities and the origin of memory T cell responses (Su et al 2013). In this last paper, what is particularly interesting is that we have found that healthy adults have abundant numbers of pathogen-specific memory T cells even for viruses that they have never been exposed to, whereas newborns do not. This suggests that there is an unexpected source of protective lymphocytes in adults that likely impact disease resistance and conversely, indicates why young children are so vulnerable to infectious diseases. In general we have found that analyzing the human immune system has presented us with many surprises and complements what we have learned in mice.

CLINICAL TRIALS

- Adaptive Immune Responses and Repertoire in Influenza Vaccination and Infection (SLVP031), Not Recruiting
- Comparison of Immune Responses to Influenza Vaccine In Adults of Different Ages (SLVP015 2007-2017), Not Recruiting
- Genetic and Environmental Factors in the Response to Influenza Vaccination, Not Recruiting
- Long-term Lung Function and Disease Progression in Children With Early Onset Primary Ciliary Dyskinesia Lung Disease, Not Recruiting

- T-cell And General Immune Response to Seasonal Influenza Vaccine (SLVP018) - Year 1, 2009, Not Recruiting
- T-cell And General Immune Response to Seasonal Influenza Vaccine (SLVP018) Year 2, 2010, Not Recruiting
- T-cell And General Immune Response to Seasonal Influenza Vaccine (SLVP018) Year 3, 2011, Not Recruiting
- T-cell And General Immune Response to Seasonal Influenza Vaccine (SLVP018) Year 4, 2012, Not Recruiting
- T-cell And General Immune Response to Seasonal Influenza Vaccine (SLVP018) Year 5, 2013, Not Recruiting
- Tissue-specific Responses to Influenza Immunization and Their Relation to Blood Biomarkers (SLVP032), Not Recruiting

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Willemijn van Deursen

Doctoral Dissertation Reader (AC)

Cort Breuer, Anthony Buzzanco, Leslie Chan, Karsten Householder, Sarah Sackey, Aaron Trotman-Grant

Postdoctoral Faculty Sponsor

Tanvi Arkatkar, Casey Beppler, Pakhi Birla, John Hausman, Masato Ogishi

Doctoral Dissertation Advisor (AC)

John Heath, Karan Kathuria, KWAT MEDETGUL-ERNAR, Azam Mohsin, Dagny Reese, Vishnu Shankar

Doctoral Dissertation Co-Advisor (AC)

Jeanna Enriquez

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)
- Immunology (Phd Program)
- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **Human Coronary Plaque T Cells Are Clonal and Cross-React to Virus and Self.** *Circulation research*
Roy Chowdhury, R., D'Addabbo, J., Huang, X., Veizades, S., Sasagawa, K., Louis, D. M., Cheng, P., Sokol, J., Jensen, A., Tso, A., Shankar, V., Wendel, B. S., Bakerman, et al
2022: 101161CIRCRESAHA121320090
- **KIR+CD8+ T cells suppress pathogenic T cells and are active in autoimmune diseases and COVID-19.** *Science (New York, N.Y.)*
Li, J., Zaslavsky, M., Su, Y., Guo, J., Sikora, M. J., van Unen, V., Christophersen, A., Chiou, S., Chen, L., Li, J., Ji, X., Wilhelmy, J., McSween, et al
2022: eabi9591
- **Minimal Information about MHC Multimers (MIAMM).** *Journal of immunology (Baltimore, Md. : 1950)*
Vita, R., Mody, A., Overton, J. A., Buus, S., Haley, S. T., Sette, A., Mallajosyula, V., Davis, M. M., Long, D. L., Willis, R. A., Peters, B., Altman, J. D.
1800; 208 (3): 531-537
- **Multiple early factors anticipate post-acute COVID-19 sequelae.** *Cell*
Su, Y., Yuan, D., Chen, D. G., Ng, R. H., Wang, K., Choi, J., Li, S., Hong, S., Zhang, R., Xie, J., Kornilov, S. A., Scherler, K., Pavlovitch-Bedzyk, et al
2022
- **Early non-neutralizing, afucosylated antibody responses are associated with COVID-19 severity.** *Science translational medicine*

- Chakraborty, S., Gonzalez, J. C., Sievers, B. L., Mallajosyula, V., Chakraborty, S., Dubey, M., Ashraf, U., Cheng, B. Y., Kathale, N., Tran, K. Q., Scallan, C., Sinnott, A., Cassidy, et al
1800: eabm7853
- **Durability of immune responses to the BNT162b2 mRNA vaccine** *MED*
Suthar, M. S., Arunachalam, P. S., Hu, M., Reis, N., Trisal, M., Raeber, O., Chinthrajah, S., Davis-Gardner, M. E., Manning, K., Mudvari, P., Boritz, E., Godbole, S., Henry, et al
2022; 3 (1): 25-27
 - **Antibodies elicited by SARS-CoV-2 infection or mRNA vaccines have reduced neutralizing activity against Beta and Omicron pseudoviruses.** *Science translational medicine*
Sievers, B. L., Chakraborty, S., Xue, Y., Gelbart, T., Gonzalez, J. C., Cassidy, A. G., Golan, Y., Prah, M., Gaw, S. L., Arunachalam, P. S., Blish, C. A., Boyd, S. D., Davis, et al
1800: eabn7842
 - **Immune imprinting, breadth of variant recognition, and germinal center response in human SARS-CoV-2 infection and vaccination.** *Cell*
Röltgen, K., Nielsen, S. C., Silva, O., Younes, S. F., Zaslavsky, M., Costales, C., Yang, F., Wirz, O. F., Solis, D., Hoh, R. A., Wang, A., Arunachalam, P. S., Colburg, et al
2022
 - **Treatment With Simvastatin and Rifaximin Restores the Plasma Metabolomic Profile in Patients With Decompensated Cirrhosis.** *Hepatology communications*
Pose, E., Sola, E., Lozano, J. J., Juanola, A., Sidorova, J., Zaccherini, G., de Wit, K., Uschner, F., Tonon, M., Kazankov, K., Jimenez, C., Campion, D., Napoleone, et al
1800
 - **Alloantigen-specific type 1 regulatory T cells suppress through CTLA-4 and PD-1 pathways and persist long-term in patients.** *Science translational medicine*
Chen, P. P., Cepika, A., Agarwal-Hashmi, R., Saini, G., Uyeda, M. J., Louis, D. M., Cieniewicz, B., Narula, M., Amaya Hernandez, L. C., Harre, N., Xu, L., Thomas, B. C., Ji, et al
2021; 13 (617): eabf5264
 - **Single-cell sequencing unveils distinct immune microenvironments with CCR6-CCL20 crosstalk in human chronic pancreatitis.** *Gut*
Lee, B., Namkoong, H., Yang, Y., Huang, H., Heller, D., Szot, G. L., Davis, M. M., Husain, S. Z., Pandol, S. J., Bellin, M. D., Habtezion, A.
2021
 - **CD4+ T cells contribute to neurodegeneration in Lewy body dementia.** *Science (New York, N.Y.)*
Gate, D., Tapp, E., Leventhal, O., Shahid, M., Nonninger, T. J., Yang, A. C., Strempl, K., Unger, M. S., Fehlmann, T., Oh, H., Channappa, D., Henderson, V. W., Keller, et al
2021: eabf7266
 - **Functional Consequences of Memory Inflation after Solid Organ Transplantation.** *Journal of immunology (Baltimore, Md. : 1950)*
Higdon, L. E., Schaffert, S., Cohen, R. H., Montez-Rath, M. E., Lucia, M., Saligrama, N., Margulies, K. B., Martinez, O. M., Tan, J. C., Davis, M. M., Khatri, P., Maltzman, J. S.
2021
 - **Evolution of Cytomegalovirus-Responsive T Cell Clonality following Solid Organ Transplantation.** *Journal of immunology (Baltimore, Md. : 1950)*
Higdon, L. E., Schaffert, S., Huang, H., Montez-Rath, M. E., Lucia, M., Jha, A., Saligrama, N., Margulies, K. B., Martinez, O. M., Davis, M. M., Khatri, P., Maltzman, J. S.
2021
 - **Effective Viral Vector SARS-CoV-2 Booster Vaccination in a Patient with Rheumatoid Arthritis after Initial Ineffective mRNA Vaccine Response.** *Arthritis & rheumatology (Hoboken, N.J.)*
Baker, M. C., Mallajosyula, V., Davis, M. M., Boyd, S. D., Nadeau, K. C., Robinson, W. H.
2021
 - **Immunophenotyping assessment in a COVID-19 cohort (IMPACC): A prospective longitudinal study** *SCIENCE IMMUNOLOGY*
Rouphael, N., Maecker, H., Montgomery, R. R., Diray-Arce, J., Kleinstein, S. H., Altman, M. C., Bosinger, S. E., Eckalbar, W., Guan, L., Hough, C. L., Krammer, F., Langelier, C., Levy, et al
2021; 6 (62)

- **Single-cell Sequencing Unveils Distinct Immune Microenvironment in Human Chronic Pancreatitis**
Lee, B., Namkoong, H., Yang, Y., Huang, H., Heller, D., Szot, G., Davis, M., Pandol, S. J., Bellin, M. D., Husain, S., Habtezion, A.
LIPPINCOTT WILLIAMS & WILKINS.2021: 1073
- **Association of Longitudinal Changes in Skeletal Muscle Mass With Survival in Patients With Pancreatic Cancer**
Lee, B., Namkoong, H., Yang, Y., Huang, H., Heller, D., Szot, G., Davis, M., Pandol, S. J., Bellin, M. D., Husain, S., Habtezion, A.
LIPPINCOTT WILLIAMS & WILKINS.2021: 1073
- **CD8+ T cells specific for conserved coronavirus epitopes correlate with milder disease in COVID-19 patients.** *Science immunology*
Mallajosyula, V., Ganjavi, C., Chakraborty, S., McSween, A. M., Pavlovitch-Bedzyk, A. J., Wilhelmy, J., Nau, A., Manohar, M., Nadeau, K. C., Davis, M. M.
2021; 6 (61)
- **An inflammatory aging clock (iAge) based on deep learning tracks multimorbidity, immunosenescence, frailty and cardiovascular aging.** *Nature aging*
Sayed, N., Huang, Y., Nguyen, K., Krejciova-Rajaniemi, Z., Grawe, A. P., Gao, T., Tibshirani, R., Hastie, T., Alpert, A., Cui, L., Kuznetsova, T., Rosenberg-Hasson, Y., Ostan, et al
2021; 1: 598-615
- **Humans with inherited Tcell CD28 deficiency are susceptible to skin papillomaviruses but are otherwise healthy.** *Cell*
Beziat, V., Rapaport, F., Hu, J., Titeux, M., Bonnet des Claustres, M., Bourgey, M., Griffin, H., Bandet, E., Ma, C. S., Sherkat, R., Rokni-Zadeh, H., Louis, D. M., Changi-Ashtiani, et al
2021
- **Nanoparticle-enabled innate immune stimulation activates endogenous tumor-infiltrating T cells with broad antigen specificities.** *Proceedings of the National Academy of Sciences of the United States of America*
Yin, Q., Yu, W., Grzeskowiak, C. L., Li, J., Huang, H., Guo, J., Chen, L., Wang, F., Zhao, F., von Boehmer, L., Metzner, T. J., Leppert, J. T., Chien, et al
2021; 118 (21)
- **Nanoparticle-enabled innate immune stimulation activates endogenous tumor-infiltrating T cells with broad antigen specificities** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Yin, Q., Yu, W., Grzeskowiak, C. L., Li, J., Huang, H., Guo, J., Chen, L., Wang, F., Zhao, F., von Boehmer, L., Metzner, T. J., Leppert, J. T., Chien, et al
2021; 118 (21)
- **Systems Immunology: Revealing Influenza Immunological Imprint.** *Viruses*
Tomic, A., Pollard, A. J., Davis, M. M.
2021; 13 (5)
- **Adoptively Transferred, In Vitro-Generated Alloantigen-Specific Type 1 Regulatory T (Tr1) Cells Persist Long-Term In Vivo**
Cepika, A., Chen, P. P., Agarwal, R., Saini, G., Louis, D. M., Amaya-Hernandez, L. C., Xu, L., Shiraz, P., Tate, K. M., Margittai, D., Bhatia, N., Meyer, E., Bertaina, et al
CELL PRESS.2021: 73
- **CRISPR/Cas9 Technology: Hypoimmunogenic Pluripotent Stem Cells Evade Immune Rejection in Fully Immunocompetent Allogeneic Recipients**
Hu, X., Deuse, T., Gravina, A., Wang, D., Tediashvili, G., Reichensperner, H., Davis, M. M., Lanier, L. L., Schrepfer, S.
ELSEVIER SCIENCE INC.2021: S28–S29
- **Learning from HIV-1 to predict the immunogenicity of T cell epitopes in SARS-COV-2.** *iScience*
Gao, A., Chen, Z., Amitai, A., Doelger, J., Mallajosyula, V., Sundquist, E., Segal, F. P., Carrington, M., Davis, M. M., Streeck, H., Chakraborty, A. K., Julg, B.
2021: 102311
- **Aging and CMV discordance are associated with increased immune diversity between monozygotic twins.** *Immunity & ageing : I & A*
Yan, Z., Maecker, H. T., Brodin, P., Nygaard, U. C., Lyu, S. C., Davis, M. M., Nadeau, K. C., Andorf, S.
2021; 18 (1): 5
- **SIMON: Open-Source Knowledge Discovery Platform.** *Patterns (New York, N.Y.)*

- Tomic, A., Tomic, I., Waldron, L., Geistlinger, L., Kuhn, M., Spreng, R. L., Dahora, L. C., Seaton, K. E., Tomaras, G., Hill, J., Duggal, N. A., Pollock, R. D., Lazarus, et al
2021; 2 (1): 100178
- **Antigen-specific T Cell Activation Distinguishes Between Recent and Remote Tuberculosis Infection.** *American journal of respiratory and critical care medicine*
Mpande, C. A., Musvosvi, M., Rozot, V., Mosito, B., Reid, T. D., Schreuder, C., Lloyd, T., Bilek, N., Huang, H., Obermoser, G., Davis, M. M., Ruhwald, M., Hatherill, et al
2021
 - **Modeling human adaptive immune responses with tonsil organoids.** *Nature medicine*
Wagar, L. E., Salahudeen, A. n., Constantz, C. M., Wendel, B. S., Lyons, M. M., Mallajosyula, V. n., Jatt, L. P., Adamska, J. Z., Blum, L. K., Gupta, N. n., Jackson, K. J., Yang, F. n., Röltgen, et al
2021
 - **Systems vaccinology of the BNT162b2 mRNA vaccine in humans.** *Nature*
Arunachalam, P. S., Scott, M. K., Hagan, T., Li, C., Feng, Y., Wimmers, F., Grigoryan, L., Trisal, M., Edara, V. V., Lai, L., Chang, S. E., Feng, A., Dhingra, et al
2021
 - **Single-cell epigenomic landscape of peripheral immune cells reveals establishment of trained immunity in individuals convalescing from COVID-19.** *Nature cell biology*
You, M., Chen, L., Zhang, D., Zhao, P., Chen, Z., Qin, E., Gao, Y., Davis, M. M., Yang, P.
2021; 23 (6): 620-630
 - **Signatures of immune dysfunction in HIV and HCV infection share features with chronic inflammation in aging and persist after viral reduction or elimination.** *Proceedings of the National Academy of Sciences of the United States of America*
Lopez Angel, C. J., Pham, E. A., Du, H. n., Vallania, F. n., Fram, B. J., Perez, K. n., Nguyen, T. n., Rosenberg-Hasson, Y. n., Ahmed, A. n., Dekker, C. L., Grant, P. M., Khatri, P. n., Maecker, et al
2021; 118 (14)
 - **Global analysis of shared T cell specificities in human non-small cell lung cancer enables HLA inference and antigen discovery.** *Immunity*
Chiou, S. H., Tseng, D. n., Reuben, A. n., Mallajosyula, V. n., Molina, I. S., Conley, S. n., Wilhelmy, J. n., McSween, A. M., Yang, X. n., Nishimiya, D. n., Sinha, R. n., Nabet, B. Y., Wang, et al
2021; 54 (3): 586–602.e8
 - **Mass Cytometry Defines Virus-Specific CD4+ T Cells in Influenza Vaccination.** *ImmunoHorizons*
Subrahmanyam, P. B., Holmes, T. H., Lin, D., Su, L. F., Obermoser, G., Banchereau, J., Pascual, V., Garcia-Sastre, A., Albrecht, R. A., Palucka, K., Davis, M. M., Maecker, H. T.
2020; 4 (12): 774–88
 - **Progenitor identification and SARS-CoV-2 infection in human distal lung organoids.** *Nature*
Salahudeen, A. A., Choi, S. S., Rustagi, A., Zhu, J., van Unen, V., de la O, S. M., Flynn, R. A., Margalef-Catala, M., Santos, A. J., Ju, J., Batish, A., Usui, T., Zheng, et al
2020
 - **Multi-Omics Resolves a Sharp Disease-State Shift between Mild and Moderate COVID-19.** *Cell*
Su, Y., Chen, D., Yuan, D., Lausted, C., Choi, J., Dai, C. L., Voillet, V., Duvvuri, V. R., Scherler, K., Troisch, P., Baloni, P., Qin, G., Smith, et al
2020
 - **Bifidobacterium alters the gut microbiota and modulates the functional metabolism of T regulatory cells in the context of immune checkpoint blockade.** *Proceedings of the National Academy of Sciences of the United States of America*
Sun, S., Luo, L., Liang, W., Yin, Q., Guo, J., Rush, A. M., Lv, Z., Liang, Q., Fischbach, M. A., Sonnenburg, J. L., Dodd, D., Davis, M. M., Wang, et al
2020
 - **The Power of Single Cell Technologies; from T Cell Receptor to Antigen(s) in Multiple Sclerosis**
Saligrama, N., Fernandes, R. A., Pai, J., Oksenberg, J., Satpathy, A., Davis, M. M.
WILEY.2020: S198
 - **The science and medicine of human immunology.** *Science (New York, N.Y.)*
Pulendran, B., Davis, M. M.

2020; 369 (6511)

- **HYPOIMMUNOGENIC DERIVATIVES OF INDUCED PLURIPOTENT STEM CELLS EVADE IMMUNE REJECTION IN FULLY IMMUNOCOMPETENT ALLOGENEIC RECIPIENTS**
Hu, X., Deuse, T., Gravina, A., Wang, D., Tediashvili, G., De, C., Thayer, W., Wahl, A., Garcia, V., Reichenspurner, H., Davis, M., Lanier, L., Schrepfer, et al
LIPPINCOTT WILLIAMS & WILKINS.2020: S200
- **Immune Profiling and Causal Antigen Discovery in Mouse and Human Models of Immune Checkpoint Inhibitor-induced Myocarditis**
Zhu, H., Lee, D., Sarah, W., Galdos, F. X., D'Addabbo, J., Fowler, M. B., Reddy, S., Heather, W., Neal, J. W., Witteles, R., Maecker, H. T., Davis, M., Nguyen, et al
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Systems immunology.** *Current opinion in immunology*
Davis, M. M.
2020; 65: 79–82
- **Discovery of a novel shared tumor antigen in human lung cancer.**
Tseng, D., Chiou, S., Yang, X., Reuben, A., Wilhelmy, J., McSween, A., Conley, S., Sinha, R., Nabet, B., Wang, C., Shrager, J. B., Berry, M. F., Backhus, et al
AMER SOC CLINICAL ONCOLOGY.2020
- **Correction to: Cardiovascular Complications in Patients with COVID-19: Consequences of Viral Toxicities and Host Immune Response.** *Current cardiology reports*
Zhu, H., Rhee, J., Cheng, P., Waliany, S., Chang, A., Witteles, R. M., Maecker, H., Davis, M. M., Nguyen, P. K., Wu, S. M.
2020; 22 (5): 36
- **The Power Of Single Cell Technologies; From T Cell Receptor To Antigen(s) In Multiple Sclerosis**
Saligrama, N., Fernandes, R. A., Pai, J., Yao, W., Louis, D. M., Oksenberg, J., Kipp, L., Dunn, J. E., Satpathy, A., Garcia, K. C., Davis, M. M.
SAGE PUBLICATIONS LTD.2020: 5–6
- **Hemagglutinin as potential in vivo driver of DQ6-restricted clonal expansion of CD4(+) T cells cross-reactive with hypocretin in narcolepsy**
Jiang, W., Birtley, J. R., Hung, S., Wang, W., Chiou, S., Davis, M. M., Stern, L. J., Mellins, E. D.
AMER ASSOC IMMUNOLOGISTS.2020
- **Clonally expanded CD8 T cells patrol Alzheimer's cerebrospinal fluid**
Gate, D., Saligrama, N., Leventhal, O., Davis, M. M., Wyss-Coray, T.
AMER ASSOC IMMUNOLOGISTS.2020
- **The Power Of Single Cell Technologies; From T Cell Receptor To Antigen(s) In Multiple Sclerosis**
Saligrama, N., Fernandes, R. A., Pai, J., Yao, W., Louis, D. M., Oksenberg, J., Kipp, L., Dunn, J. E., Satpathy, A., Garcia, K. C., Davis, M. M.
SAGE PUBLICATIONS LTD.2020: 126
- **Hypoimmunogenic Derivatives of Induced Pluripotent Stem Cells Evade Immune Rejection in Fully Immunocompetent Allogeneic Recipients**
Hu, X., Deuse, T., Gravina, A., Wang, D., Tediashvili, G., De, C., Thayer, W., Wahl, A., Garcia, V., Reichenspurner, H., Davis, M., Lanier, L., Schrepfer, et al
ELSEVIER SCIENCE INC.2020: S176–S177
- **Towards the identification of novel tumor antigens in human lung cancer.**
Chiou, S., Tseng, D., Wang, C., Reuben, A., Yang, X., Wilhelmy, J., McSween, A., Zhang, J., Shrager, J., Garcia, K., Davis, M.
AMER ASSOC CANCER RESEARCH.2020: 44–45
- **Distinct immune characteristics distinguish hereditary and idiopathic chronic pancreatitis.** *The Journal of clinical investigation*
Lee, B., Adamska, J. Z., Namkoong, H., Bellin, M. D., Wilhelm, J. J., Szot, G. L., Louis, D. M., Davis, M. M., Pandol, S., Habtezion, A.
2020
- **Comprehensive T cell repertoire characterization of non-small cell lung cancer.** *Nature communications*
Reuben, A., Zhang, J., Chiou, S., Gittelman, R. M., Li, J., Lee, W., Fujimoto, J., Behrens, C., Liu, X., Wang, F., Quek, K., Wang, C., Kheradmand, et al
2020; 11 (1): 603

- **Clonally expanded CD8 T cells patrol the cerebrospinal fluid in Alzheimer's disease.** *Nature*
Gate, D., Saligrama, N., Leventhal, O., Yang, A. C., Unger, M. S., Middeldorp, J., Chen, K., Lehallier, B., Channappa, D., De Los Santos, M. B., McBride, A., Pluvinage, J., Elahi, et al
2020
- **Author Correction: In vivo clonal expansion and phenotypes of hypocretin-specific CD4+ T cells in narcolepsy patients and controls.** *Nature communications*
Jiang, W. n., Birtley, J. R., Hung, S. C., Wang, W. n., Chiou, S. H., Macaubas, C. n., Kornum, B. n., Tian, L. n., Huang, H. n., Adler, L. n., Weaver, G. n., Lu, L. n., Ilstad-Minnihan, et al
2020; 11 (1): 242
- **Cardiovascular Complications in Patients with COVID-19: Consequences of Viral Toxicities and Host Immune Response** *Curr Cardiol Rep*
Zhu, H., Rhee, J., Cheng, P., Waliyany, S., Chang, A., Witteles, R. M., Maecker, H., Davis, M. M., Nguyen, P. K., Wu, S. M.
2020; 22 (5)
- **T cell analysis in vaccination.** *Current opinion in immunology*
Davis, M. M.
2020; 65: 70–73
- **Analyzing the Mycobacterium tuberculosis immune response by T-cell receptor clustering with GLIPH2 and genome-wide antigen screening.** *Nature biotechnology*
Huang, H. n., Wang, C. n., Rubelt, F. n., Scriba, T. J., Davis, M. M.
2020
- **Injectable Hydrogels for Sustained Codelivery of Subunit Vaccines Enhance Humoral Immunity.** *ACS central science*
Roth, G. A., Gale, E. C., Alcántara-Hernández, M. n., Luo, W. n., Axpe, E. n., Verma, R. n., Yin, Q. n., Yu, A. C., Lopez Hernandez, H. n., Maikawa, C. L., Smith, A. A., Davis, M. M., Pulendran, et al
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